

NON-VOLATILE MEMORY AND METHOD OF FORMING THEREOF

## Abstract of the Disclosure

5           A semiconductor device includes a non-volatile memory, such as an electrically erasable programmable read only memory (EEPROM) array of memory cells. The memory is arranged as an array of cells in rows and columns. Each column of the array is located within an isolated well, common to the cells in the column but isolated from other wells of other columns. The  
10       array is programmed by pulsing potentials to each column, with isolation of results for each column. In one embodiment, the memory cells are devoid of floating gate devices and use a non-conductive charge storage layer to store charges. In another embodiment, the memory cells store charges in  
15       nanocrystals.